NEWBORN CARE IN AYURVEDA- A REVIEW

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ABSTRACT

Newborn care in Ayurved includes Pranapratyagamana or resuscitation of baby which adds striking two stones, sprinkling water, cleaning of oral cavity, putting cloth soaked in oil, giving madhu andghrita for licking. Acharya Vagbhata has mentioned features of asphyxiated baby. After that cutting and care of umbilical cord is mentioned. Later Acharyas mentioned general nursing care of newborn includes bath, feeding (nutrition and fluid intake), clothing, maintenance of body temperature and protection from infections or Rakshakarma. For feeding Acharyas have given schedule for first 4 days, as most of the mothers do not have sufficient milk secretion. Also Acharyas have mentioned special decoctions as per different dosha for bath. In modern science newborn care is mentioned in detailed with the use of different instruments and protocol based management. Either Ayurveda or modern newborn cares both are expalined for the easy adaptation of baby after birth in outer environment without any complication so that newborn mortality as well as morbidity.

KEYWORDS: Pranapratyagamana, Snana, Mukhavishodhna, Nalachedana, Jatakarma, Raksha karma.

INTRODUCTION

Various Ayurved texts including Charak Samhita, Sushruta Samhita, Ashtanghiridaya have been described new born care. In general, the care of a normally delivered newborn at birth includes prevention of asphyxia, hypothermia, early rooming in and initiation of breast feeding. The description related to care of newborn can be divided into following:

1. Immediate care of Newborn  
a) Ulva - Parimajrana (Cleaning of Vernix caseosa)  
b) Resuscitation of normal baby  
c) Resuscitation of unconscious or asphyxiated baby  
d) Cutting of umbilical cord

2. General Care  
a) Bath  
b) Feeding  
c) Bed and Clothes  
d) Protective measures.

AIMS AND OBJECTIVES

To study scientific background of new born care described in Ayurveda.

DISCUSSION

1. Immediate care of Newborn  
(a) ULVA - PARIMARKARNA

Acharya Sushruta1 has advised to first and foremost clear/remove the ulva (vernix caseosa) from the body of newborn baby. Acharya Vagbhata2 has advised application a mixture of saindhava ghrita for ulvaparimarjana and further to massage the baby with bala oil which provides relief from stress/pressures undertaken by the baby during the birth process. The drug Bala (Sidacordifolia), mentioned here, according to Ayurveda, has the following properties:3 balakaraka (provide strength), grahi and cures (nashnaum) vata, rakatapitta (hemorrhagic/bleeding disorders), raktavikara and vrana. Research also corroborates these facts as Sidacordifolia (bala) showed following properties - antioxidant activity,4 anti-inflammatory effect,5 antimicrobial activity.6 After birth, massage with oil is popular in Indian culture and may prove beneficial as it provides insulation against heat and insensible water loss. Some oil may get absorbed through the thin skin of the baby to provide some insensible water loss. Some oil may get absorbed through the thin skin of the baby to provide some

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warmth to newborn besides stimulating the nervous system into action soon after

(b) Resuscitation of normal baby
- Acharya Charak⁷ said that Sound should be produced by striking or rubbing two stones together, near the base of the ear of new born.
- Then Hot or cold water should be sprinkled over face of the child. For proper cleaning of oral cavity doctor should use his cleaned finger with cotton.
- Once the child is properly cleaned, anterior fontanelles should be protected by putting a cotton pad soaked in oil.
- Give ghrita mixed with saindhav to remove swallowed garbhodakā.

In modern science routine stomach wash is not advised in normal newborns but is advised in some special conditions like in babies born through a Caesarean section, severely asphyxiated babies, meconium stained amniotic fluid, polyhydramnios, infants of diabetic mothers, hypo plastic small for dates babies etc. For this, the prescribed method nowadays is stomach wash with normal saline using an appropriate length nasogastric tube.

After completing these processes, first feed of madhu and ghrita is offered. Susruta⁹ has changed the sequence of processes for resuscitation but had described amply processes analogous to Charaka and Vagbhattach⁸ has also followed Susruta.

(c) Resuscitation of unconscious baby
Usually, Most of the newborn revive without any special effort. Few may suffer from deep unconsciousness. Charak mentioned fan winnowing basket made of Vamsa (soop) or black broken earthen pot (Krishankapalika). Vagbhattach asked to irrigate with Bala tail, fanning with winnowing basket endochant enchan mantra in right ear of new born. Hehas also given features of asphyxiated baby: Deep unconsciousness, No cry, Decreased or unstable dhatu, Hypersensitivity of pain stimuli, Toxic look.

(d) Cutting and care of umbilical cord
Charak¹³ opines that after measuring the cord Sangulas from the umbilicus, it is hold with two fingers and to be cut with the ardhadrarasasātra. It should be made of gold, silver, iron or any other metal. The cut end of cord should be tied properly with thread and hanged loosely with the neck. Dalhanahas said that cord should be irrigated properly with Kushtaol¹⁴ Vagbhattach has advised that umbilical cord should be cut only four angula distal to umbilicus.

Nowadays, umbilical cord is clamped without delay after delivery. The first ligature is tied about 2-3 cm from the abdomen of the baby and second ligature is tied 5 cm from the abdomen. Then the cord is cut by use of clean blade/scissor in between these two ligatures and the cut end is inspected for presence of normal anatomical contents of umbilical cord i.e. two arteries and one vein. A clean autoclaved thread, disposable cord clamp or a sterile rubber band is used for cord clamping. Cord is left as such with an aim to keep it dry and avoiding repeated handling to prevent sepsis. Inspection of the cord is advised at every 15-30 minutes for initial few hours after birth for early detection of any oozing from the cord which may occur due to loosening of ligatures and shrinkage of cord. Generally, the umbilical stump dries and falls off anytime between 5-10 days after birth.

2. General Care of Infant
(a) Bath
Susruta said to massage with bala oil, then give bath. For that kala, dosha, bala of the child should be viewed.

Table 1: Dalhana¹⁵ has mentioned specific decoction as per different dosha.

<table>
<thead>
<tr>
<th>Decoction</th>
<th>Dosa dominance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ksirivriksha</td>
<td>Pitta</td>
</tr>
<tr>
<td>Sarvangodaka</td>
<td>Vats</td>
</tr>
<tr>
<td>Hot water prepared with immersing heated gold or silver rod</td>
<td>Less strength of baby</td>
</tr>
<tr>
<td>Kapittha</td>
<td>Less strength of baby</td>
</tr>
</tbody>
</table>

I. Ksheerivriksha consists of Nayagarodha (Ficusbengalensis), Udumber (Ficusglomerata), Ashwatha (Ficusreligiosa), Parisha (Thespesiapopulnea) and Pakara (Ficusinfectioria). They have following properties – kashya rasa, sheet virya, raksha, varnya properties andcures vrana (wound), meda, visrapa (erysipelas), shotha (edema/inflammation), pitta-kapha-rakta vikaras. Some Acharyas replaced parishwith vetasa (Salix caprea) and shirisha (Albizziabebbeck). These herbal drugs also showed anti-oxidantproperties as:

1. Ficusbengalensis showed antimicrobial activity,¹⁶,¹⁷ anti-inflammatory and analgesic activity.¹⁸
2. Ficusreligiosashowed antioxidant, wound healing andanti-inflammatory activity,¹⁹ and antimicrobial activity.²⁰
4. Thespesiapopulneashowed antimicrobial activity,²² mastcell stabilization and antianaphylacticactivity,²³ and antiinflammatoryactivity.²⁴
5. Albizzialebebeckshowed analgesic and anti-inflammatoryactivities,²⁵ anti-arthritic and antioxidant property,²⁶ analgesic and antipyretic activity.

II. Sarvangandha group consists of Chaturjata [which consists of Dalchini (Cinnamomumzeylanicum), Tejapatra (Cinnamomummatamala), Ela (Elettariacardamomum), Nágkesara (Mesuaferrea),

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Kapura (Cinnamomum camphora), Kankola (Piper cubeba), Aguru (Aquilaria agallocha), Shilarasa (Liquidambar orientalis), Lavanga (Syzygium cumini)

These drugs are described with following properties as:

1. Dalchini (Cinnamomum zeylanicum): Tikta rasa, vatapittanashaka, balya (provide strength), cures thirst. It also showed anti-inflammatory, anti-microbial activity.[28]

2. Tejaputra (Cinnamomum tamala): Madhura rasa, pichhiha, laghu and cures kapha-vataja roga, arsha, aruchi, pina. It also showed antimicrobial activity,[30] antioxidants activity,[31] and anti-inflammatory, analgesic and anti-pyretic activity.[32]

3. Ela (Elettaria cardamomum): Katu in rasa, sheevtiya, laghu and cures kapha, kshva, kasa, vataj roga. This herb showed antimicrobial activity.[33]

4. Nagkeshara (Mesua ferrea): Kasya rasa, usnavirya, ruksha, lauq, pachanum, and cures jvara, kandu, kustha, vamana, visps, kapha-pittaj roga. It also showed anti-nociceptive and anti-inflammatory activity,[34] antioxidant activity,[35] and analgesic activity.[36]


6. Kankola (Piper cubeba): Laghu, tikshna, usnavirya, tikta in rasa and cures hridroga, kapha-vataja roga, durgandata. During trial showed antimicrobial efficacy[37] and antioxidant activity.[38]

7. Aguru (Aquilaria agallocha): Usnavirya, kata-tikta iinrassa, tikshna, laghu, beneficial for skin and cures eyediseases, vata-kapha roga. It also showed analgesic and anti-inflammatory activity.[39,40] and antimicrobial activity.[41]

8. Silarasa: Katu rasa, madhura, snigdha, usnavirya, kantikarka, and cures sweda, kushta, daha, jvara


III. Shudha Swaran: ShudhaSwaran (gold metal) have following properties as snigdha, viryavardhaka, medhasmriti-budhi-vardhaka, agrivardhaka, ruchivardhaka andcures yashshma, unmada, sarvadoshashghana.[46] Shudha Rajat have following properties as kशय and anti asthma in rasa, sheetal, lekham, snigdha, dipana, balakara, ayushtharkara, medhya and cures vata-kapha vikaras and sarvarogaapharum.

Nowadays, immediate bathing at birth is not practiced fearing the grave risk of cross infection and hypothermia. Generally, bathing of a newborn is postponed tillit is proper stabilization in terms of temperature, respiration etc. Moreover as nowadays most deliveries are institutional, inmost hospitals no bath schedule is adopted during hospital stay of the baby to reduce incidences of nosocomial infections. In contrast, nowadays, skin of the newborn is gently cleaned removing any secretions, mucus, blood and/or meconium. Further, it is advocated that the baby should not be bathed orsponged using unmediated soap and clean lukewarm water.[50] Soap is better to be restricted to body parts like groins, axillae and napkin areas. After this the baby is adequately clothed to avoid.

(b) Feeding

Mother milk is best for babies; most of mothers do not have sufficient secretion of milk. Forthat, Ancient scholars have specially prescribed feeding schedule of neonate for first 4 days.[48]

Table No 2: Feeding schedule of neonate

<table>
<thead>
<tr>
<th>Day</th>
<th>Feeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Madhu + Ghrita + Ananta</td>
</tr>
<tr>
<td>2</td>
<td>Madhu + Ghrita + Laxmana</td>
</tr>
<tr>
<td>3</td>
<td>Madhu + Ghrita + Laxmana</td>
</tr>
<tr>
<td>4</td>
<td>Breastmilk</td>
</tr>
</tbody>
</table>

Also as per fluid requirement, baby can be given water.

The beneficial properties of the above mentioned drugs as propounded in Ayurveda and certain experimental studies are:


2. Madhu: According to Acharya Charaka, madhu iskashaya and madhura in taste, shitavirya, sandhankara (er-union activity), chedana (herbs that help scrape awayam; also an expectorant), cures raktpittah (hemorrhagic/bleeding disorders) and kaphaj roga.[49] Honey has been shown in recent experimental studies to possessantimicrobial, antiviral,[47] antioxidant,[48] and consists ofcarbohydrates[49] (mainly glucose and fructose) whichprovides energy.[50] etc.

3. Breast milk: Acharya Charaka described breast milk asjivaman, brihanam (anabolic), satmya (favorable/wholesome), snehanam (unctuous)[51]. Acharya Sushruta[48] said breast milk is madhura rasa (sweet), jivanam, pathyam, dipanam (digestive) etc.

These days exclusive breast feeding without the addition of infant formula or any solid food is advised for the initial six month right from first day of life. Artificial feeding is reported to be associated with likely morbidity from pneumonia, diarrhea, ear infections, necrotizing enterocolitis etc. Infections. Colostrum, the thick yellowish milk produced during first few days of lactation is rich in vitamins, proteins andprotective antibodies and...
hence must be administered to the newborn promptly. Otherwise also the breast milk contains an ideal balance of nutrients that promote growth and development of a baby and also promotes its ideal mental development. It has a number of nutritional benefits as high concentrations of lactose, presence of taurine and cysteine amino acids along with other proteins; amongst fats it is rich in polyunsaturated fatty acids and omega-2, 6 fatty acids. It contains disease defending factors like immunoglobulin, macrophage, lymphocytes, lysozymes, epidermal growth factors etc. which are potent against allergies and various opportunistic infections.[52]

(c) Clothes and bed
Susruta and Vagbhata said to use soft cotton and silk cloth, keeping the head on east side.[53]

(d) Protective Measures
Charak said to protect newborn from various infections:[54]
- To use twigs of adani, pilu, khadira, parushaka for hanging.
- Sarshapa, atasi, tandula tied around and inside of Sutikagara. Tandulabali obligation should be given for 10 days.
- Rakshoghna drugs like vacha, hingu, sarsapa, atasi, lasuna etc. are kept in a packet and hanged in upper portion of doorframe. Also small packets containing these drugs also are tied in the neck of the puerperal woman and newborn, over cooking pots water pots, bed.
- Inside sutikagara, fire should be lit daily with woods of kanakakantaka or Tinduka. Attendant present in Sutikagara should remain awake.
- Santi homa should be performed daily.

Susruta[55] and Vagbhata also said same things using fumigation with rakshoghna drugs. They also said to tie bhurjapatra having hymn like arya,aparajita written with gorochna. Vagbhata 13 has advised that on 6th night of birth of the child, all the family members and friends remain awake and raksha karma should be performed by offering sacrifices.

The various drugs mentioned in dhupana karma have antiseptic and antimicrobial properties which have been proved so experimentally in various studies in recent times. Present neonatal care includes special aseptic measures to be adopted aiming to prevent any infection of the newborn. Right from the initiation of birth process, measures for sepsis and antisepsis such as clean hands, clean surface, use of sterile surgical instruments (blade/scissor), clean handling of the cord, use of surgical mask, gloves etc. are to be religiously followed until handling and resuscitation of the newborn baby. Appropriate hygiene is advised throughout the newborn care to decrease infection episodes during infancy.

**CONCLUSION**
In View of above description it can be concluded that newborn care mentioned by our Acharyas is not only wholesome, but scientific too. If these things are practiced along with modern science instruments and principles it will be highly beneficial to newborn baby.

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